BACKGROUND DOCUMENT #2

This document builds upon the Background Document Prepared for the August 2014 meeting and serves as an update. Originally, I thought that the audience would be a single landowner that would enter the carbon market and that the PTEIR for Carbon Sequestration and Fuel Reduction would support the project. However, because of the 5,000 acre limitation and the economics of scale, this audience is less likely to enter the carbon market than originally thought. A project of 5,000 acres or less is hard to justify economically because of the of the costs associated with selling carbon, for example, verification costs are about $30,000 every 5 years. One way to reduce costs would be for landowners to aggregate, and share costs. However, the ARB Protocol does not allow for aggregation.

Through ongoing research, including into the intent of the legislation, the originally conceived audience were coalitions of landowners, not engaged in management. The PTEIR for Carbon Sequestration and Fuel Reduction would incentivize these landowners to engage in management, which would result in improved forest health, increased growth and reduced fuel, which, in turn, would yield a carbon benefit.

The following part of the legislation addresses this audience**:**

> **4598**
> The Legislature finds and declares all of the following:
> (b) Over one-half of the privately owned, commercial timberland in the state is owned by nonindustrial landowners. These lands will be increasingly important in the state's efforts to meet the goals of the California Global Warming Solutions Act of 2006. The owners of these lands often lack the forestry expertise, economic incentive, or capital needed to make investments to decrease present and future greenhouse gas emissions from their lands and the potential for wildland fires that release greenhouse gases.
> **And 4598.2.**
> (b) (1) The PTEIR for carbon sequestration and fuel reduction program conducted by the department shall encourage forest resource improvements and otherwise facilitate good timberland management through a program of financial and technical assistance to smaller nonindustrial landowners and coalitions of smaller nonindustrial landowners for the development of watershed-specific PTEIRs for watersheds where the primary focus of the contemplated work is reduction of greenhouse gases.

So as not to exclude the single landowner wanting to enter the carbon market a disclosure, such as the following, may suffice.

> If landowners are going to enter into the carbon market, it is critical that they develop the PTEIR to meet ARB Protocols and that they do it simultaneously, so that the PTEIR does not constrain the number of carbon credits that may be considered additional and therefore be able to be sold.

Given the rigor and expense, associated with the ARB Protocol, and the limited number of people that will use this grant funded planning mechanism to support a carbon project, what structure will be used to show a carbon benefit in lieu of the ARB Protocol? Having posed this question, the concepts behind the ARB Protocol, which follow, should be applicable:

1. Real (can be measured to a high degree of accuracy and is based on an activity that has occurred, not one that is projected to occur in the future).
2. Additional (occurs outside of any regulatory requirement and would not have occurred but for the incentive provided by a GHG market).
3. Verifiable (can be (and has been) independently verified).
4. Enforceable (ownership is undisputed and enforcement mechanisms exist to ensure all program rules are followed) and
5. Permanent (is removed from the atmosphere for a minimum of 100 years).

The lowest level to show a carbon benefit would be to require demonstrated practices. The following three sources provide a list of management activities that increase carbon sequestration.
The ARB Protocol states eligible management activities may include, but are not limited to:

1. Increasing the overall age of the forest by increasing rotation ages.
2. Increasing the forest productivity by thinning, diseased, and suppressed trees.
3. Managing competing brush and short-lived forest species.
4. Increasing the stocking of trees on understocked areas.
5. Maintaining stocks at a high level.

Ryan in “A Synthesis of the Science on Forests and Carbon for U.S. Forests” suggest that there are three ways to increase (in the forest) carbon storage through active management:

1. Lengthen harvest intervals.
2. Reduce the amount of material removed.
3. Increase growth. (Staff comment: with the understanding that growth, once the site is at full capacity and the suppressed and intermediate trees have been removed, will decline as standing inventory increases.)

In Appendix C of the original A 32 Scoping Plan, reduction opportunities through forest management are captured in the following excerpt:
"There are significant opportunities to increase the carbon storage on managed forest lands over the next few decades by increasing forest growth through healthy and fully stocked stands that utilize site potential for growth while resisting or minimizing emissions from fire, insects and disease. Stands on timberlands statewide are growing at approximately 2.4 percent per year and this represents about 70 to 75 percent of their potential. Many of the timberland owners in California could make voluntary choices to manage their forestlands at a level above the minimums of the Forest Practice Rules. Implementation approaches include:

1. Riparian Zone Extension: The voluntary extension of existing riparian protection zones currently required by the Forest Practice Rules.
2. Timber Stand Improvement: These activities include:
    a. restoring conifer areas to full productivity by reduction of undesirable species and restocking with native species,
    b. thinning stands to increase the growth rate for remaining trees,
    c. optimizing rotation age from a carbon life cycle perspective,
    d. planting additional trees where the existing stocks are not fully utilizing the biological potential of the site."

The next level would be to incorporate quantification methods. The thing to consider is the stronger the proof that the project will yield a carbon benefit the stronger the project, which increases the ability to justify expenditure of the auction proceeds, which is the source of this funding.

So what is ARB and the Department doing:

- ARB is working on the Guidance document for disadvantaged communities, which should be done by the end of September, then they will start work on developing full funding guidelines for all agencies implementing programs or projects using Cap-and-Trade auction proceeds. This will include the guidance on disadvantaged communities, as well as guidance on quantification and project tracking and reporting requirements. ARB expects to have the full funding guidelines complete by the middle of 2015. ARB holds regular multi-agency meetings with implementing agencies on the use of monies and development of ARB's Funding Guidelines.
- ARB recognizes that Agencies will be developing their own program guidelines to enable disbursement of the funds this fiscal year before ARB's guidance is finalized.
- ARB and implementing Agencies will need to work closely to avoid conflicting guidelines or conflicting levels of rigor.
- ARB has been conveying to the Agencies the projects funded by this money must further the purposes of AB 32 and reduce greenhouse gas emissions.
- ARB is uncertain, at this initial stage of development, what level of quantification will be required – this will be the subject of discussion as they develop the full funding guidelines.

My suggestion regarding next steps would be to wait until the Department's Guidelines, including those on quantification methods are done. Then use them, the concepts behind the ARB Protocol and demonstrated practice to inform preparation of a whole day workshop on the PTEIR for Carbon Sequestration and Hazard Reduction.

An important question for the Board to be considering prior to this workshop is:

Does the Board want to promulgate regulations, guidelines or publications?